

Application No.: 10/575,173

Docket No.: 06005/41124

LISTING OF CLAIMS

1. (Currently amended) An integrated graphical user interface for a process control environment, the interface comprising:
a configuration environment including a plurality of graphical element objects; [[and]]
a runtime environment including a real-time interface to two or more functional areas of a process plant, the functional areas including operations, maintenance, configuration, and simulation[[.]];
~~the real-time interface providing two or more real-time displays provided by the real-time interface, each of the two or more real-time displays corresponding to a different functional area of the process plant from a set of real-time displays, the set of real-time displays including an operator display, a maintenance display, a configuration display, and a simulation display; and~~
a same graphic element included on each of the two or more real-time displays and bound includes a same graphic element corresponding to a same graphical element object of the plurality of graphical element objects.
2. (Canceled)
3. (Canceled)
4. (Previously Presented) The interface of claim 1, wherein the two or more real-time displays include a display of at least one of: a panel motor start/stop button, a status indication, a chart recorder, an annunciator panel, a subsystem interface, a maintenance request, a maintenance report, or a supervisory report.
5. (Previously Presented) The interface of claim 1, wherein the interface supports an operator interface for performing one or more of: alarm management, process parameter adjustment by entry of process parameters, zoom in viewing of portions of the process for enhanced detail viewing, or utilization of specialized applications related to the process.

Application No.: 10/575,173

Docket No.: 06005/41124

6. (Currently amended) The interface of claim 1, wherein the interface can run in a dedicated mode and a non-dedicated mode, the dedicated mode comprising at least one of: a mode including a fixed display arrangement or a mode corresponding to controlled access, and the non-dedicated mode for use by configuration personnel.

7. (Canceled)

8. (Previously Presented) The interface of claim 1, wherein the the same graphical element object is executable on one or more of a workstation, a laptop, a PDA (Personal Data Assistant), a display on multiple monitors, or a smart phone.

9. (Canceled)

10. (Canceled)

11. (Previously Presented) The interface of claim 1, wherein the interface supports multiple user interface devices including at least one of a rich client, a web browser, a handheld, or a smart phone.

12. (Previously Presented) The interface of claim 1, wherein the interface supports one or more of: integrated voice and video; real-time data services; external data services; XML files; access to other service interfaces; composite structure process graphics; class-based control hierarchies; integration of control, alarming, and abnormal situation management and prevention; integrated batch operator interfaces; integrated advanced control operator interfaces; route management; efficiency calculations; optimizations; mass and energy balances; integration of third party applications; multiple data collection systems (DCS), or combinations thereof.

13. (Previously Presented) The interface of claim 1, wherein the runtime environment further includes an instantiation process that binds, during runtime, the same graphical element object to a data source in the process control environment.

Application No.: 10/575,173

Docket No.: 06005/41124

14. (Currently amended) An integrated graphical interface providing integrated graphical displays for operation, maintenance, configuration, and simulation of a control system, the interface comprising:

a real-time user interface providing two or more real-time displays, each of the two or more real-time displays corresponding to a different functional level of a set of real-time displays-functional levels of the control system, the set of real-time displays-functional levels including an operations functional level display, a maintenance functional level display, a configuration functional level display, and a simulation functional level display;

a graphic element included on each of the two or more real-time displays, the graphic element ~~[[and]]~~ corresponding to a same graphical element object bound to each of the two or more real-time displays and to a data source in the ~~process plant, control system; and~~

the same graphical element object including an element binding and at least one of a visualization, an element parameter, an element property, an element action, or ~~[[and]]~~ an element animation.

15. (Canceled)

16. (Canceled)

17. (Canceled)

18. (Canceled)

19. (Currently amended) A method, comprising:

providing an integrated graphical user interface for two or more functional areas of a process plant, the functional areas including operations, maintenance, configuration, and simulation;

providing two or more real-time displays, each of the two or more real-time displays corresponding to a different functional area ~~from a set of real-time displays, the set of real-time displays including an operation display, a maintenance display, a configuration display, and a simulation display;~~

providing a set of graphical element objects, each graphical element object corresponding to a different data source in the process plant; and

Application No.: 10/575,173

Docket No.: 06005/41124

including, on each of the two or more real-time displays, a particular graphic element corresponding bound to a same graphical element object of the set of graphical element objects.

20. (Previously Presented) The method of claim 19, further comprising:
providing a set of graphical display objects, each graphical display object including at least two graphical element objects from the set of graphical element objects; and
including, on each of the two or more real-time displays, a particular graphic display corresponding to a same graphical display object of the set of graphical display objects.

21. (Previously Presented) The interface of claim 1, wherein the same graphical element object includes at least one of a visualization, a parameter or property, an action or animation, or a binding.

22. (Previously Presented) The interface of claim 1, wherein the configuration environment further includes a plurality of graphical display objects, each graphical display object includes at least two graphical element objects, and each of the two or more real-time displays includes a graphic display corresponding to a graphical display object of the plurality of graphical display objects.

23. (Previously Presented) The interface of claim 22, wherein the graphical display object further includes at least one of: a connector, an animation or action, a property, or a binding.

24. (Previously Presented) The interface of claim 6, wherein the non-dedicated mode is for use by configuration personnel.

25. (Previously Presented) The interface of claim 1, wherein the configuration environment further includes a graphical display editor for creating the plurality of graphical element objects and a graphic object database for storing the plurality of graphical element objects.

Application No.: 10/575,173

Docket No.: 06005/41124

26. (Currently amended) The interface of claim 1, wherein the same graphical element object is included in at least one of: predictive control, predictive maintenance, or system level error detection in the process plant. [100]

27. (Previously Presented) The integrated graphical interface of claim 14, further comprising a graphic display included on each of the two or more real-time displays, the graphic display corresponding to a graphical display object bound to each of the two or more real-time displays, the graphical display object including at least two graphical element objects, a display binding, a connector, and at least one of a display property, a display action, or a display animation.

28. (Previously Presented) The integrated graphical interface of claim 14, further comprising a graphical display editor for creating a new graphical element object, a graphical database for storing a set of graphical element objects that includes the new graphical element object and the same graphical element object, and an instantiation process that binds the same graphical element object to the data source via the element binding.

29. (Previously Presented) The integrated graphical interface of claim 14, wherein the real-time user interface is provided on at least one of: a workstation, a laptop, a PDA (Personal Data Assistant), a display across multiple monitors, a multi-screen workstation, a rich client, a web browser, a handheld, or a smart phone.